

Date: Thursday, 14/08/2008 2:54:14 PM
User: Linda Lacelle

Process Sheet

| | |
|-------------------------------------------------------------------|------------------------------------------------------------|
| Customer : CU-DAR001 Dart Helicopters Services | Drawing Name : ENERGY ATTENUATING PROVISION KIT |
| Job Number : 41249 | |
| Estimate Number : 13548 | |
| P.O. Number : | Part Number : DSI 9419011 |
| This Issue : 14/08/2008 S.O. No. : | Drawing Number : DSI9419 PREL A |
| Prsht Rev. : NC | Project Number : N/A |
| First Issue : / / Type : MACHINED PARTS | Drawing Revision : PREL A |
| Previous Run : | Material : |
| Written By : _____ | Due Date : 21/08/2008 Qty: 1 Um: Each |
| Checked & Approved By : _____ | |
| Comment : Est Rev:A New Issue 08-08-14 JLM Verified By: LL | |

Additional Product

PRELIMINARY ISSUE

Job Number:



| Seq. #: | Machine Or Operation: | Description : |
|---------|-----------------------|---------------|
|---------|-----------------------|---------------|

1.0

DC

DOCUMENT CONTROL



S 6/8/20 **CHG001** ~~CHG001~~



Comment: Photocopy bluefile & type labels per PPPDSI 9419-011

2.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Pick Packing Kit

3.0

D32341

Doubler



Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)

Doubler

BATCH: *B41251**50*

4.0

D32343

Doubler



Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)

Doubler

BATCH: *41252**50*

5.0

D3808041

Seat Rail Assembly



Comment: Qty.: 2.0000 Each(s)/Unit Total: 2.0000 Each(s)

Seat Rail Assembly

BATCH: *B41230**5/8/20**50*

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Drawing Name: ENERGY ATTENUATING PROVISION KIT

Job Number: 41249

Part Number: DSI 9419011

Job Number:



| Seq. #: | Machine Or Operation: | Description : |
|---------|-----------------------|---------------|
|---------|-----------------------|---------------|

| | | |
|-----|--------|---------------|
| 6.0 | D38091 | Sliding Block |
|-----|--------|---------------|



Comment: Qty.: 4.0000 Each(s)/Unit Total : 4.0000 Each(s)

Sliding Block

BATCH: 1341118

8/8/20

SP

| | | |
|-----|----------|---------------------|
| 7.0 | D3811041 | Seat Track Assembly |
|-----|----------|---------------------|



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Seat Track Assembly

- 41240

New Batch

8/8/20

| | | |
|-----|-------------|-------|
| 8.0 | MS20426AD45 | Rivet |
|-----|-------------|-------|



Comment: Qty.: 14.0000 Each(s)/Unit Total : 14.0000 Each(s)

Rivet

M3459

SP

| | | |
|-----|-------------|-----------------------|
| 9.0 | MS20470AD45 | Rivet, Universal Head |
|-----|-------------|-----------------------|



Comment: Qty.: 34.0000 Each(s)/Unit Total : 34.0000 Each(s)

Rivet, Universal Head

BATCH: M106918

SP

| | | |
|------|-------------|-----------------------|
| 10.0 | MS20470AD46 | Rivet, Universal Head |
|------|-------------|-----------------------|



Comment: Qty.: 18.0000 Each(s)/Unit Total : 18.0000 Each(s)

Rivet, Universal Head

BATCH: M107082

SP

| | | |
|------|-----------|-----|
| 11.0 | MS21042L3 | Nut |
|------|-----------|-----|



Comment: Qty.: 9.0000 Each(s)/Unit Total : 9.0000 Each(s)

Nut

BATCH: M108764

8/8/18

SP

| | | |
|------|-----------|-------|
| 12.0 | MS24694S3 | Screw |
|------|-----------|-------|



Comment: Qty.: 8.0000 Each(s)/Unit Total : 8.0000 Each(s)

Screw

BATCH: M108936

8/8/18

SP

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Drawing Name: ENERGY ATTENUATING PROVISION KIT

Job Number: 41249

Part Number: DSI 9419011

Job Number:



| Seq. #: | Machine Or Operation: | Description : |
|---------|-----------------------|---------------|
|---------|-----------------------|---------------|

| | | |
|------|------------|-------|
| 13.0 | MS24694S50 | Screw |
|------|------------|-------|



Comment: Qty.: 9.0000 Each(s)/Unit Total : 9.0000 Each(s)

Screw

BATCH: M108673

50

| | | |
|------|-------------|-------|
| 14.0 | MS24694S150 | Screw |
|------|-------------|-------|



Comment: Qty.: 4.0000 Each(s)/Unit Total : 4.0000 Each(s)

Screw

BATCH: M108946

54

| | | |
|------|-----------|--------|
| 15.0 | AN960JD10 | Washer |
|------|-----------|--------|



Comment: Qty.: 9.0000 Each(s)/Unit Total : 9.0000 Each(s)

Washer

BATCH: M108558

8/8/18

50

| | | |
|------|-----|------------------------------------|
| 16.0 | QC4 | INSPECT 100% KITS FOR COMPLETENESS |
|------|-----|------------------------------------|



Comment: INSPECT 100% KITS FOR COMPLETENESS

08/08/20

08.08.20

07-08-20

ENGINEERING APPROVAL

| | | |
|------|-------------|-----------------------|
| 17.0 | PACKAGING 1 | PACKAGING RESOURCE #1 |
|------|-------------|-----------------------|



Comment: PACKAGING RESOURCE #1

Identify and pack for shipping as per PPP DSI9419-011

Location: _____

PPP Rev: _____

PPP. ~~41249~~ Draft

18 08/08/20

| | | |
|------|------|------------------------------|
| 18.0 | QC21 | FINAL INSPECTION/W/O RELEASE |
|------|------|------------------------------|



Comment: FINAL INSPECTION/W/O RELEASE

08/08/21

Job Completion



POSITIVE RECALL

EFFECTIVE 08-08-20 AUTH

RELEASED DATE

PH

08.08.20

DART SERVICE INSTRUCTION

TO AMEND INSTALLATION INSTRUCTIONS IIN-D350-689 REV. A
AND FLIGHT MANUAL SUPPLEMENT FMS-D350-689 REV. A
AND INSTRUCTIONS FOR CONTINUED AIRWORTHINESS ICA-D350-689 REV. 0
REF. CANADIAN STC: SH02-33
REF. FAA STC: SR01620NY

PURPOSE

The purpose of this DSI is to add the D350-689-021 Dual High Back Seat Installation, LH, the D350-689-023 Floor Provisions Kit and the D350-689-043 Dual High Back Seat Assembly to IIN-D350-689 Rev. A. The D350-689-021/-023 Kits are compatible with the Energy Attenuating Seat rails in later AS 350/355 model aircraft.

The DSI 9419-011 Kit includes the parts that are required to convert a D350-689-011 installation into a D350-689-021 installation.

PART LIST

| -011 | -021 | -023 | -043 | P/N | DESCRIPTION |
|------|------|------|------|--------------|-----------------------------------------|
| X | | | | DSI 9419-011 | ENERGY ATTENUATING CONVERSION KIT |
| | X | | | D350-689-021 | DUAL HIGH BACK SEAT INSTALLATION, LH |
| | 1 | X | | D350-689-023 | ENERGY ATTENUATING FLOOR PROVISIONS KIT |
| | 1 | | X | D350-689-043 | DUAL HIGH BACK SEAT ASSEMBLY |
| | | | 2 | D3016-041 | SEAT FRAME ASSEMBLY |
| | | | 1 | D3017-041 | BACK FRAME ASSEMBLY |
| | 1 | | | D3018-1 | SEAT CUSHION |
| | 1 | | | D3019-1 | BACK CUSHION |
| | | | 1 | D3021-041 | TUBE ASSEMBLY |
| | | | 1 | D3022-1 | SEAT PAN |
| | | | 1 | D3023-1 | BACK PANEL |
| | | | 3 | D3024-1 | SPACER |
| | | 1 | | D3025-1 | BEAM |
| | | 1 | | D3026-1 | CHANNEL |
| | | 1 | | D3027-1 | CLIP |
| | | 1 | | D3027-3 | CLIP |
| | | 1 | | D3027-5 | CLIP |
| | | 4 | | D3027-7 | CLIP |
| | | | 2 | D3031-1 | LOOP |
| 1 | | 1 | | D3234-1 | DOUBLER |
| 1 | | 1 | | D3234-3 | DOUBLER |
| 2 | | | 2 | D3808-041 | SEAT RAIL ASSEMBLY |
| 4 | | | 4 | D3809-1 | SLIDING BLOCK |
| 1 | | 1 | | D3811-041 | SEAT TRACK ASSEMBLY |

CANADA
DEPARTMENT OF TRANSPORT
AIRCRAFT CERTIFICATION
BRANCH
DAO # 01-O-01

APPROVED

BY: 
D. SHEPHERD (DE # 02)

DATE: Aug. 19/2008
CERT. NO.: SH02-33
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| DRAWN | RF | | |
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| MFG. APPR. | N/A | DSI 9419 | SHEET 1 OF 5 |
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| -011 | -021 | -023 | -043 | P/N | DESCRIPTION |
|------|------|------|------|---------------|------------------------|
| | | | 3 | AN3-12A | BOLT |
| 14 | | 14 | | MS20426AD4-5 | RIVET |
| 34 | | 34 | | MS20470AD4-5 | RIVET |
| 18 | | 18 | | MS20470AD4-6 | RIVET |
| | | 32 | | MS20470AD5-6 | RIVET |
| | | | 40 | MS20600AD4W2 | RIVET |
| | | | 6 | MS20600AD4W3 | RIVET |
| 9 | | 9 | 23 | MS21042L3 | NUT (or MS21042-3) |
| | | | 4 | MS24693-S272 | SCREW |
| 8 | | | 8 | MS24694-S3 | SCREW |
| 9 | | 9 | | MS24694-S50 | SCREW |
| 4 | | | 4 | MS24694-S148 | SCREW |
| | | | 4 | MS27039-1-17 | SCREW |
| | | | 12 | MS27039-1-19 | SCREW |
| | | | 23 | NAS1149D0332J | WASHER (or AN960JD10L) |
| 9 | | 9 | | NAS1149D0363J | WASHER (or AN960JD10) |

PROCEDURE

1. Install the under floor structure as outlined in steps 1-18 of IIN-D350-689 Rev. A and DSI 9311 Rev. A as applicable, except do not install D3032-1 Spacers. Attach D3026-1 Channel to floor using (14) MS20426AD4 rivets. Ensure D3234-1/-3 Doublers are installed per DSI 9269 Rev. A.
2. Position the D3811-041 Seat Track Assy at LBL 27.33 as shown in Figure 1 to be in-line with the existing seat rails at LBL 8.98 and LBL 19.16.
3. Transfer the attachment holes from D3811-041 Seat Track Assy to aircraft floor (9 pls) using a $\varnothing 0.201$ (#7 drill). Deburr holes. Install D3811-041 using (9) MS24694-S50 screws, (9) NAS1149D0363J washers, and (9) MS21042L3 nuts as shown in Figure 1. Torque screws to 20 to 25 in-lbs (2.3 to 2.8 Nm).
4. If converting a -041 Seat Assembly to a -043 Seat Assembly, remove D3028-1 Studs, D3029-1 Springs, and D3030-1 Locks from the D350-689-041 Seat Assembly. Install (2) D3808-041 Seat Rails Assemblies as shown in Figure 1 Detail A using (4) MS24694-S148 Screws. Torque screws to 100 to 140 in-lbs (11.3 to 15.8 Nm). Install D3809-1 Sliding Blocks using (2) MS24694-S3 screws as shown in Figure 1 Detail A. Torque screws to 12 to 15 in-lbs (1.4 to 1.7 Nm).
5. Remove screws from back end of Seat Tracks at LBL 27.33 and LBL 8.98. Slide D350-689-043 Seat Assembly into both seat tracks and lock in desired position using D3810-1 Retractable Spring Plungers. Re-install screws on back of seat tracks per the Aircraft Maintenance Manual.

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| MFG. APPR. | N/A | DSI 9419 | SHEET 2 OF 5 |
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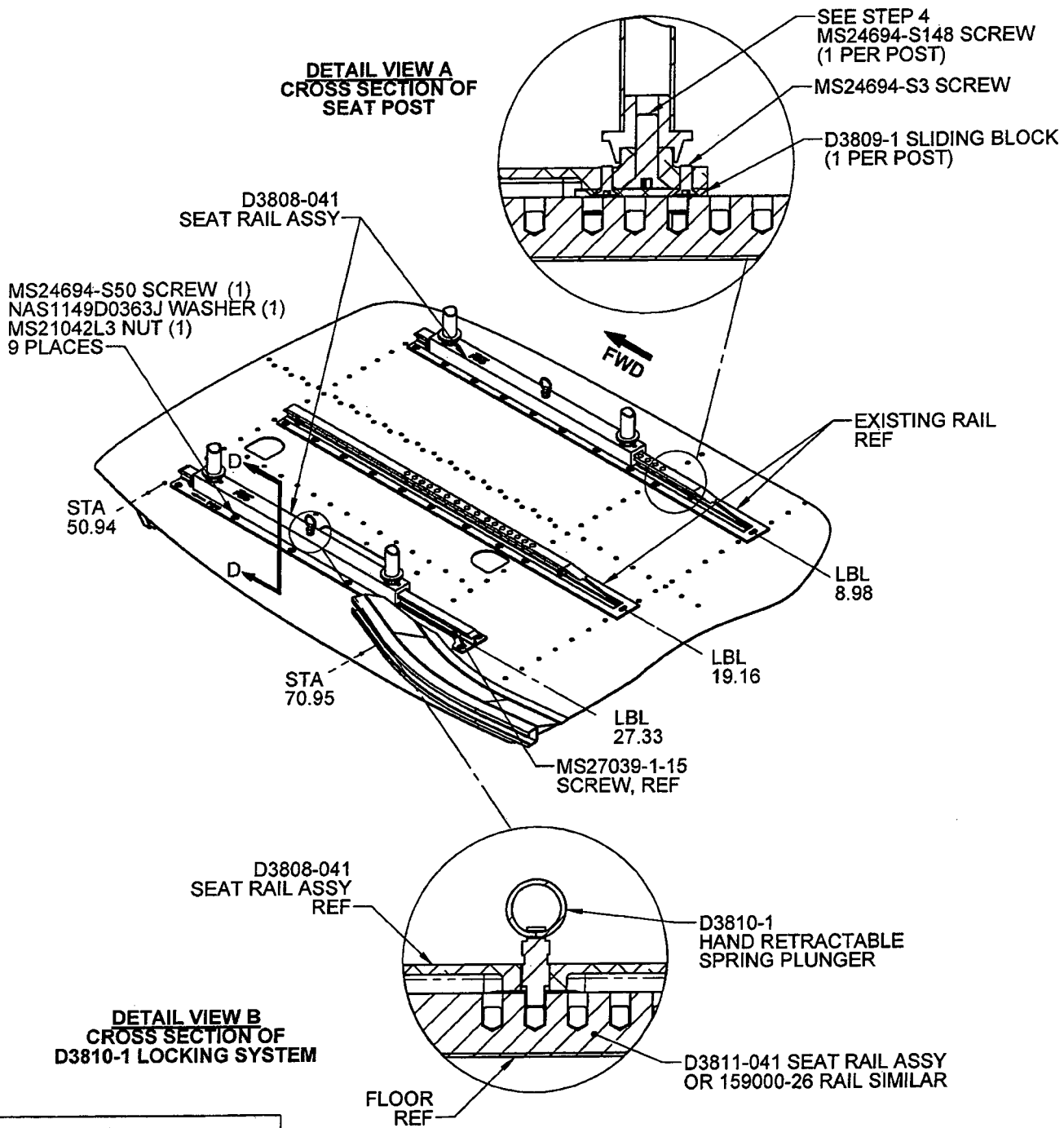


FIGURE 1 D350-689-021 INSTALLATION

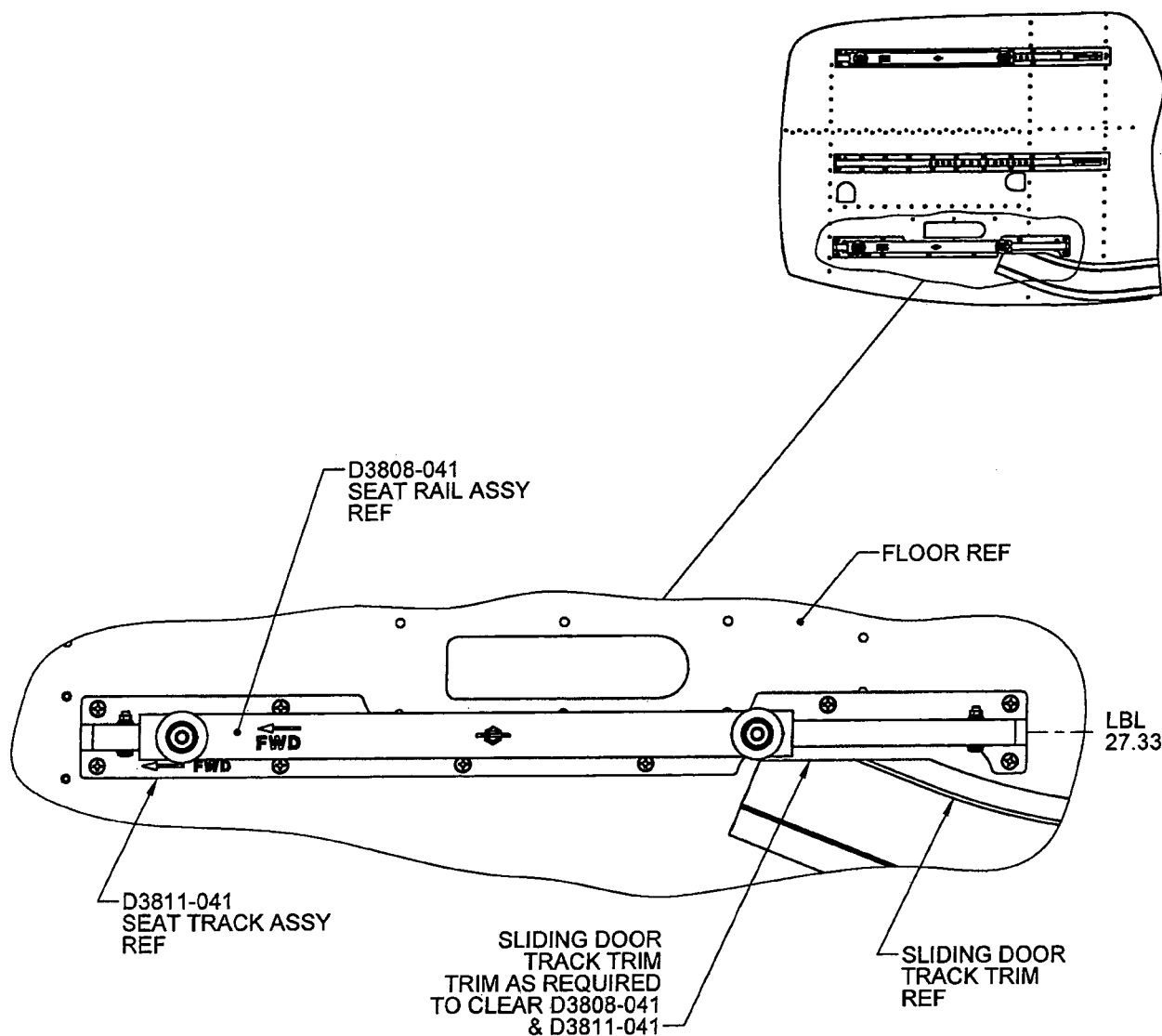
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**DETAIL VIEW C
SLIDING DOOR TRACK TRIM**

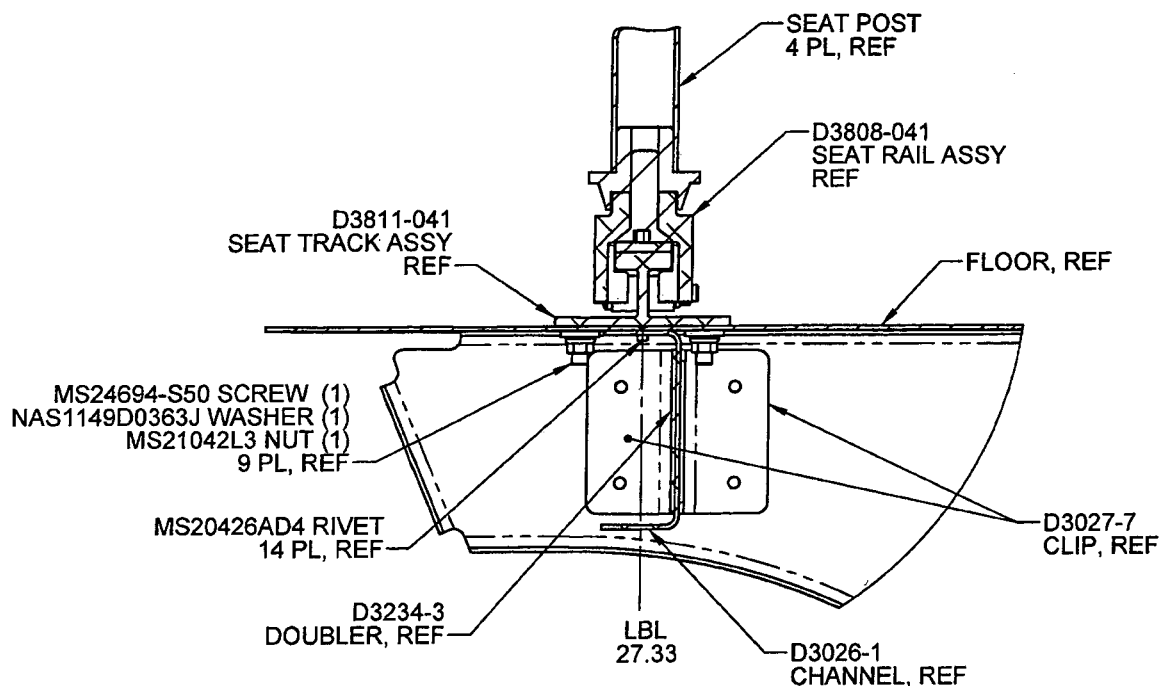
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CROSS SECTION D-D

WEIGHT AND BALANCE

The following is the net weight increase associated with the Kits.

| Installation | Weight | LATERAL | | LONGITUDINAL | |
|----------------------------------------------------------------|--------------------|---------------------|-------------------------|-------------------|-------------------------|
| | | Arm | Moment | Arm | Moment |
| DSI 9419-011 Energy Attenuating Conversion Kit | 1.1 lb 0.50 kg | -18.2 in -0.46 m | -20 in-lb -0.2 m-kg | 60.7 in 1.54 m | 67 in-lb 0.77 m-kg |
| D350-689-021 Dual High Back Seat Installation, LH Fwd Position | 28.6 lb 13.0 kg | -18.2 in -0.46 m | -521 in-lb -6.0 m-kg | 60.7 in 1.54 m | 1736 in-lb 20.0 m-kg |
| D350-689-021 Dual High Back Seat Installation, LH Aft Position | 28.6 lb 13.0 kg | -18.2 in -0.46 m | -521 in-lb -6.0 m-kg | 64.7 in 1.64 m | 1850 in-lb 21.3 m-kg |
| D350-689-023 Energy Attenuating Floor Provisions Kit | 2.5 lb 1.1 kg | -18.2 in -0.46 m | -46 in-lb -0.5 m-kg | 62.2 in 1.58 m | 156 in-lb 1.7 m-kg |

REVISED LOADING CHART

With respect to the Loading Chart in FMS-D350-689, when the Dual High Back Seat has been installed in an aircraft with Energy Attenuating Seat rails per this DSI, the occupants are located at STA 61.02 when the seat is in the Fwd position and at STA 65.02 when the seat is in the Aft position.

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